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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/828,715	04/06/2001	Christine W. Jarvis	CXU-350	5602

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EXAMINER

RHEE, JANE J

ART UNIT	PAPER NUMBER
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1772

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DATE MAILED: 07/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/828,715

Applicant(s)

JARVIS ET AL.

Examiner

Jane J Rhee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 41-74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 41-74 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 38-71 been renumbered 41-74.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 41-44,46-51,53,56-61,63-64,67-74 are rejected under 35 U.S.C. 102(b) as being anticipated by Obayashi et al. (4410575).

Obayashi et al. discloses a first substrate having an upper and a lower surface (figure 6 number 1) and a second substrate having an upper and lower surface (figure 6 number 2), positioning a continuous thermoplastic tape folded into a z-shaped configuration bonded adjacent to the first substrate and the second substrate (figure 6 number 11) such that the tape is in operative communication with the upper and lower surfaces of the first substrate and with the upper and lower surfaces of the second substrate (figure 6 number 11), and forming a seam by bonding the tape to the upper

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and lower surfaces of the first substrate and to the upper and lower surfaces of the second substrate (figure 6 numbers 11,12, 13), wherein the bond between the tape and the substrate is an adhesive bond, physical bond or combination thereof (figure 6).

Obayashi et al. discloses that the method further comprises heating the first and second tape portion to a predetermined temperature (col. 4 lines 25-28). Obayashi et al.

discloses that the first and second predetermined temperature is between about 10°C

below the thermal melting temperature of the thermoplastic material to about 50°C

above the thermal melting temperature of the thermoplastic material (col. 4 lines 25-31).

Obayashi et al. discloses that the first and second portion of the tape is subjected to pressure (col. 4 line 12). Obayashi et al. discloses that the first tape portion to

simultaneous heat and pressure and subjecting the second tape portion to simultaneous heat and pressure (col. 4 lines 10-12). Obayashi et al. discloses that the first substrate

and second substrate are fabrics (col.1 line 6). Obayashi et al. discloses multiple layers in the tape portion (col. 5 lines 36-38) and that the layers contain thermoplastic material

having a first thermal melting temperature and another one of the layers contain a

thermoplastic material having a second thermal melting temperature, the second

thermal melting temperature being greater than the first thermal melting temperature

(col. 3 lines 57-58, col. 4 lines 25-29). Obayashi et al. discloses that the tape portions

are folded after being placed adjacent to first substrate and the second substrate (col. 5 lines 27-31). Obayashi et al. discloses that at least one of the tape portions comprises

polyurethane (col. 8 line 25).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 45,55,62,65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obayashi et al. in view of Benstock et al. (5003902).

Obayashi et al. discloses the method of forming a seam between two substrates described above. Obayashi et al. fail to disclose that the pressure is between about 40 pounds per square inch to about 120 pounds per square inch. Obayashi et al. fail to disclose that the edge of at least one of the substrate is non linear. Benstock et al. teaches that the pressure is 40 pounds per square inch (col. 5 line 2) for the purpose of providing optimum heating and fusing characteristics (col. 5 line 1). Benstock et al. discloses that the edge of at least one of the substrate is non linear (figure 1A number 10) for the purpose creating a liquid tight barrier (col. 3 lines 13-14).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide Obayashi et al. with the pressure of 40 pounds per square inch in order to provide optimum heating and fusing characteristics (col. 5 line 1) as taught by Benstock et al.

Furthermore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide Obayashi et al. with the edge of at least

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one of the substrate being non linear (col. 7 line 39) in order to create a liquid tight barrier (col. 3 lines 13-14) as taught by Benstock et al.

4. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Obayashi et al. in view of Arakawa et al. (5591521).

Obayashi et al. discloses the method of forming a seam between two substrates described above. Obayashi et al. fail to disclose that the tape portions are folded prior to being placed adjacent to the first substrate and the second substrate. Arakawa et al. teaches that the tape portions are folded prior to being placed adjacent to the first substrate and the second substrate for the purpose of having a portion of the tape being easily released to latch on to the second substrate (col. 5 line 55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide Obayashi et al. with the tape portions that are folded prior to being placed adjacent to the first substrate and the second substrate in order to have a portion of the tape being easily released to latch on to the second substrate (col. 5 line 55) as taught by Arakawa et al.

5. Claims 54 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obayashi et al. in view of Wilhoit et al. (6096420).

Obayashi et al. discloses the method of forming a seam between two substrates described above. Obayashi et al. fail to disclose that the method further comprises etching at least one of the surfaces of the first substrate or the second substrate. Wilhoit et al. teaches etching (col. 2 lines 64-65) on the surfaces of plastic films for the

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purpose of enhancing the affinity of the film surface to the pressure sensitive adhesive (col. 2 lines 58-60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time applicant's invention was made to provide Obayashi et al. with etching on the surfaces of plastic films in order to enhance the affinity of the film surface to the pressure sensitive adhesive (col. 2 lines 58-60) as taught by Wilhoit et al.

Response to Arguments

6. Applicant's arguments filed 5/12/03 have been fully considered but they are not persuasive.

In response to applicant's argument that the projections 12 and 13 of Obayashi et al.'s tape are not bonded to the fabric substrates, Obayashi et al.'s tape is bonded to the fabric substrate with a combination of an adhesive bond and physical bond, in col. 5 lines 20-24 Obayashi discloses that the interposed middle portion of the tape is welded by a high frequency wave treatment and/or heat treatment (col. 2 lines 41-45) and a layer of adhesive can be used on the interposing operation of the bonding tape (col. 5 lines 36-40) therefore the middle portion of the tape is adhesively bonded to the fabric substrate, also the forces that are applied to the welded portions of the fabric, portions of the forces can be absorbed by deforming the fin shaped projections 12 and 13 in figure 6 (col. 5 lines 20-24) thus the forces that deform the fin shape projections 12 and 13 physically bonds to the fabric substrate by pressure.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jane J Rhee whose telephone number is 703-605-4959. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 703-308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Jane Rhee
July 16, 2003



SANDRA M. NOLAN
PATENT EXAMINER
TECHNOLOGY CENTER 1700.